

## Tender Specifications

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Pre-written bill-of-quantities texts for including NIKOS systems in tenders and procurement documents.  
Free to use and adapt. As of 10/2026.

**Notes on use:** Quantities, units, duration of use and project-specific requirements are to be defined by the contracting authority. Product names serve as reference products, in each case “or equivalent”. The stated values are minimum requirements that an equivalent product must meet. This is a courtesy translation; for German procurement procedures the German original applies.

### Item 1: Central operator station (**NIKOS** [dispatcher]<sup>2</sup> or equivalent)

Supply of a central operating and monitoring station for controlling all announcement, switching and signaling functions via touch operation.

#### Minimum requirements

- Touchscreen operation (10 inch) with map view and GPS position display of all units
- Announcements live, pre-recorded and via text-to-speech (German, English) to single targets, groups or all targets
- Status monitoring and power failure alerts, text messages to radio users, spontaneous radio group formation (over-the-air regrouping)
- Integrated DMR radio, double encryption, at least 64 talk groups (receive), no fixed upper limit for units and users
- Interface for visitor counting (GPIO), remote control and monitoring of external devices
- Integrated gooseneck microphone, stereo speakers; operation on 230 V
- Transportable in flight case, ingress protection IP54 with flight case closed
- CE, EN 300 113, ETSI TS 102 361

Quantity: \_\_\_\_\_ units

## Item 2: Mobile announcement & alerting system (**NIKOS** [audio]<sup>2</sup> or equivalent)

Supply and operational provision of a radio-based, mobile announcement and alerting system for temporary public address and visitor guidance at event sites.

### Minimum requirements

- Digital radio transmission (DMR), double encryption (over-the-air and end-to-end encryption), radio range up to 15 km (open field)
- Feed into existing PA systems without structural modifications: 2 × XLR in/out (analog, stereo), loop-through with ducking, no level loss
- Direct connection of 1–4 active horn loudspeakers
- Digital talk groups (single, several, all), at least 64 per device
- Operation without Wi-Fi, mobile network or internet; integrated backup power ( $\geq 16$  h standby,  $\geq 2$  h announcement operation), solar extension possible
- Ingress protection IP67, operating temperature  $-15 \dots +45$  °C
- Feedback of the operating status of each unit to a central point (including mains power failed, battery low, connection test)
- Outputs for remote switching: 2 × 12 V (battery-backed), 3 GPIO, contact loop; pilot tone to interrupt funfair rides
- Setup by one person in under 10 minutes
- CE, EN 300 113, ETSI TS 102 361

**Quantity:** \_\_\_\_\_ units

Number of units, duration of use and route length are to be defined project-specifically (see quantity calculation below).

### Quantity calculation for announcement units

The number of announcement units depends on the length of the route to be covered, not on the area, because horn loudspeakers radiate directionally. At typical ambient noise levels, the hearing radius of a horn loudspeaker is 50–60 m. An announcement unit with horn loudspeakers facing both directions therefore covers 100–120 m.

- Spacing of units: 100–120 m
- Number = route length / 100 m (rounded up) + 1
- Example: a 1,500 m route requires 16 units ( $1,500 \text{ m} / 100 \text{ m} + 1$ )
- In loud environments (e.g. festival tent music) reduce the spacing

### Item 3: Accessories (optional)

| Item | Component                                                    | Minimum requirements                                                                                                                                                                                                                                     | Quantity    |
|------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 3.1  | <b>NIKOS</b> [horn] <sup>2</sup><br>active loudspeaker       | Active horn loudspeaker with integrated amplifier, hearing radius 50–60 m at typical ambient noise levels, 12 W, sound pressure level 113 dB (1 m), ingress protection IP65, –20...+55 °C, CE                                                            | as required |
| 3.2  | <b>NIKOS</b> [flash] <sup>2</sup><br>flashing light          | Red flashing light, approx. 1 Hz, visibility approx. 100 m, ingress protection IP44, 12 V, CE                                                                                                                                                            | as required |
| 3.3  | <b>NIKOS</b> [relay] <sup>2</sup><br>remote switching module | Remote switching of external 230 V / 10 A loads, time-controlled, manual or event-based, ingress protection IP67, CE                                                                                                                                     | as required |
| 3.4  | <b>NIKOS</b> [moon] <sup>2</sup><br>emergency light          | Self-sufficient solar-battery light, escape route lighting according to DIN EN 1838, > 1 lx permanent, > 3 lx with motion detection, up to 6 h continuous operation, ingress protection IP65, installation at 4 m height by one person without tools, CE | as required |
| 3.5  | <b>NIKOS</b> [LED] <sup>2</sup><br>work & emergency lighting | Remotely switchable 10 W mini LED, 6,000 K, illumination radius 6 m, immediately active in case of a power failure, ingress protection IP65, CE                                                                                                          | as required |
| 3.6  | <b>NIKOS</b> [clamp] <sup>2</sup><br>mounting system         | Mounting for announcement unit and horn loudspeaker on poles and trees up to 30 cm in diameter, load capacity 50 kg, steel, 2 × 25 mm tension strap, one-person installation, CE                                                                         | as required |
| 3.7  | <b>NIKOS</b> [XLR] <sup>2</sup><br>channel expansion         | 4 additional audio channels per unit, up to 14 analog or 28 AES3 audio paths per site, cascable up to 3×, IP44, CE                                                                                                                                       | as required |
| 3.8  | <b>NIKOS</b> [RJ45] <sup>2</sup><br>network cable adapter    | Transmission of audio and control over standard network cable up to 100 m, IP44, CE                                                                                                                                                                      | as required |

### Item 4: Notes on evaluation

- Proof of at least 3 reference deployments of comparable scope
- Rental option incl. setup, dismantling and technical support
- Training of operating staff
- Proof of header encryption
- Proof that the announcement units ignore “all calls”